

Space Weather Highlights
06 August - 12 August 2018

SWPC PRF 2241
13 August 2018

Solar activity was very low throughout the period. No Earth-directed CMEs were observed in available satellite imagery.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was normal background levels throughout the period.

Geomagnetic field activity was ranged from quiet to active. Quiet levels were observed on 06 Aug, 08-10 Aug and 12 Aug; unsettled levels were reached on 07 Aug and active levels were reached on 11 Aug. Mostly nominal solar wind conditions were observed through the period. A SSBC followed by very weak influence from a negative polarity CH HSS occurred on 11 Aug. Total magnetic field strength briefly reached 11 nT around 11/0400 UTC but no significant periods of southward Bz were observed.

Space Weather Outlook
13 August - 08 September 2018

Solar activity is expected to be very low throughout the outlook period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to range from normal to moderate levels over the outlook period.

Geomagnetic field activity is expected to range from quiet to active levels over the outlook period. Unsettled levels are expected on 13 Aug, 18 Aug, 04 Sep and 07-08 Sep; active levels are expected on 16-17 Aug, 20-21 Aug and 03 Sep. All increases in geomagnetic activity are anticipated in response to multiple, recurrent CH HSSs. The remainder of the outlook period is expected to be at quiet levels.



Daily Solar Data

Date	Radio	Sun	Sunspot	X-ray		Flares							
	Flux	spot	Area	Background		X-ray			Optical				
	10.7cm	No.	(10 ⁻⁶ hemi.)	Flux		C	M	X	S	1	2	3	4
06 August	69	0	0	A1.2	0	0	0	0	0	0	0	0	0
07 August	70	0	0	A1.2	0	0	0	0	0	0	0	0	0
08 August	70	0	0	A1.3	0	0	0	0	0	0	0	0	0
09 August	70	0	0	A1.1	0	0	0	0	0	0	0	0	0
10 August	70	0	0	A1.2	0	0	0	0	0	0	0	0	0
11 August	67	0	0	A1.1	0	0	0	0	0	0	0	0	0
12 August	68	0	0	A1.0	0	0	0	0	0	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)			Electron Fluence (electrons/cm ² -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
06 August		1.6e+06	1.8e+04	3.6e+03		2.2e+06
07 August		1.1e+06	1.9e+04	3.7e+03		7.4e+05
08 August		8.7e+05	1.8e+04	3.6e+03		6.6e+05
09 August		8.3e+05	1.8e+04	3.8e+03		1.1e+06
10 August		9.0e+05	1.7e+04	3.6e+03		1.5e+06
11 August		1.0e+06	1.7e+04	3.7e+03		6.2e+05
12 August		8.0e+05	1.8e+04	3.7e+03		5.5e+05

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
06 August	5	0-1-1-1-3-2-1-1	1	0-1-0-0-0-0-1-0	4	0-1-1-1-2-1-1-1
07 August	11	2-2-2-3-3-2-3-3	13	2-3-1-2-5-3-2-1	10	2-2-2-2-3-2-3-2
08 August	6	1-2-2-1-3-1-1-2	6	1-1-2-3-3-1-0-1	5	1-1-2-1-2-1-1-1
09 August	6	1-1-2-2-2-0-3-2	4	1-0-2-3-2-0-0-0	5	1-1-2-2-1-0-1-1
10 August	4	1-1-1-1-2-1-1-1	1	1-1-0-0-0-0-0-1	4	1-1-1-0-1-1-1-1
11 August	11	1-2-3-2-4-2-2-3	8	1-2-2-2-3-2-2-2	11	2-2-2-2-3-2-2-4
12 August	6	2-1-1-1-3-1-2-1	8	1-1-0-4-4-1-1-0	5	1-1-1-2-2-1-2-2

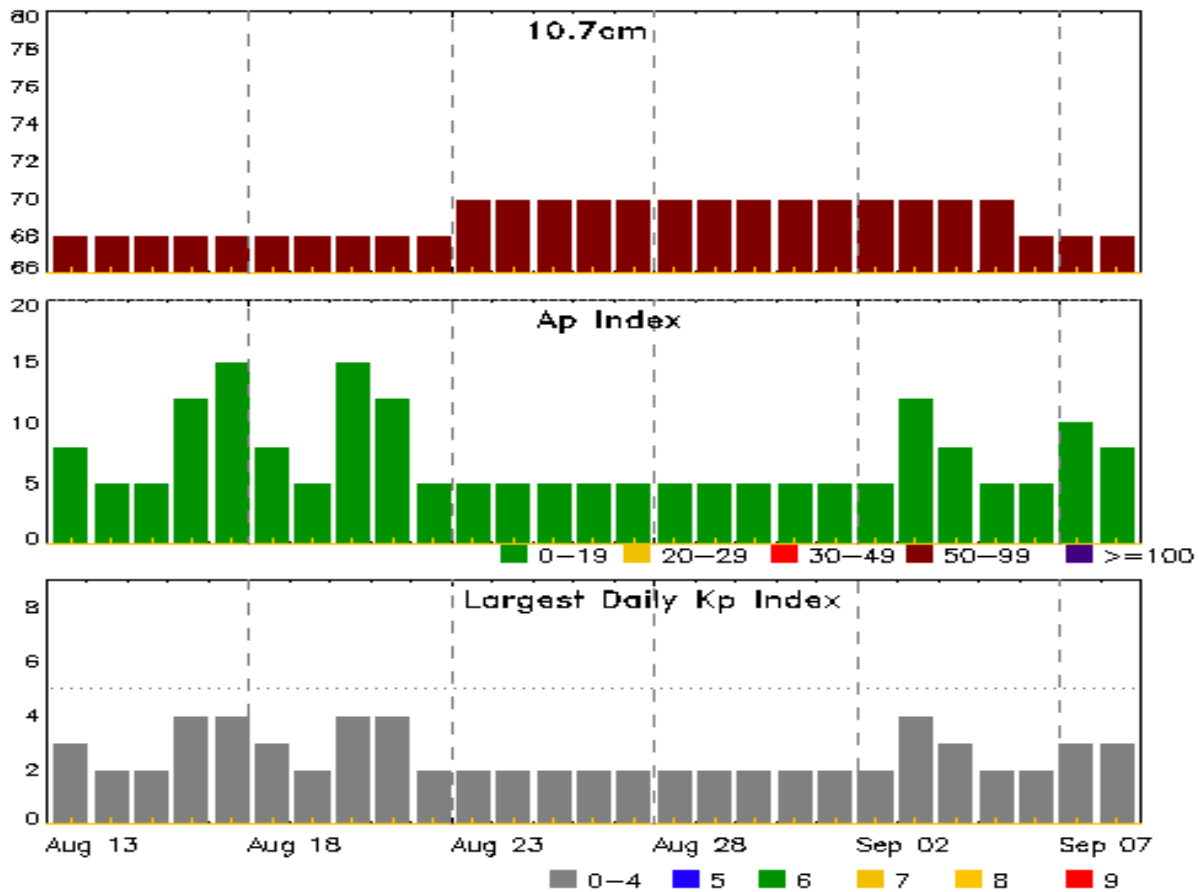


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
11 Aug 1436	WARNING: Geomagnetic K = 4	11/1436 - 2359
12 Aug 0000	ALERT: Geomagnetic K = 4	11/2359



Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
13 Aug	68	8	3	27 Aug	70	5	2
14	68	5	2	28	70	5	2
15	68	5	2	29	70	5	2
16	68	12	4	30	70	5	2
17	68	15	4	31	70	5	2
18	68	8	3	01 Sep	70	5	2
19	68	5	2	02	70	5	2
20	68	15	4	03	70	12	4
21	68	12	4	04	70	8	3
22	68	5	2	05	70	5	2
23	70	5	2	06	68	5	2
24	70	5	2	07	68	10	3
25	70	5	2	08	68	8	3
26	70	5	2				

Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half	Class	Flux	Imp/	Location	Rgn	Radio Flux		Intensity	
			Max			Brtns			245	2695	II	IV

No Events Observed

Flare List

Date	Time			X-ray	Optical		
	Begin	Max	End		Imp/	Location	Rgn
				Class	Brtns	Lat CMD	#
10 Aug	1600	1601	1602	A1.0			



Region Summary

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
		Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
Region 2717															
01 Aug	S07E29	25	10	1	Axx	1	A								
02 Aug	S08E14	27	10		Axx	1	A								
03 Aug	S08W00	27	plage												
04 Aug	S08W14	28	plage												
05 Aug	S08W28	29	plage												
06 Aug	S08W42	30	plage												
07 Aug	S08W56	31	plage												
08 Aug	S08W70	31	plage												
09 Aug	S08W84	32	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 27

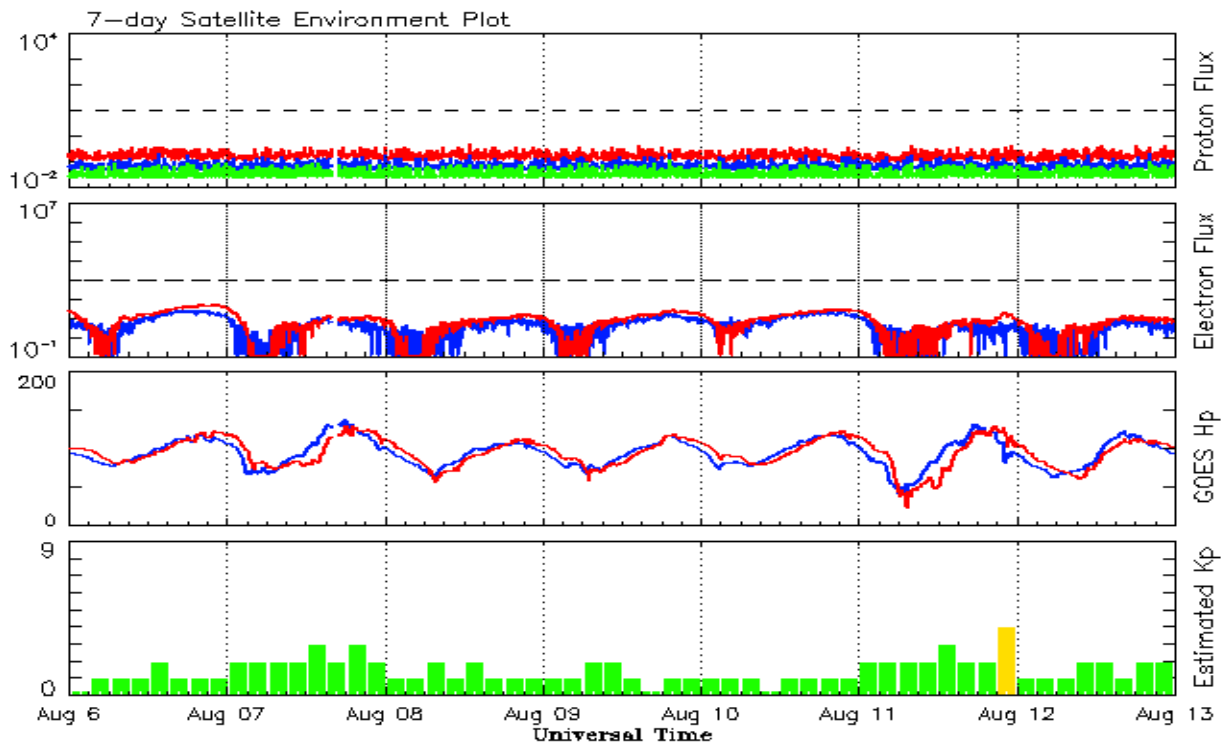


Recent Solar Indices (preliminary)
Observed monthly mean values

Month	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
2016									
August	50.4	30.1	0.60	34.2	21.6	85.0	85.5	10	11.2
September	37.4	26.8	0.72	32.1	19.9	87.8	83.7	16	11.3
October	30.0	20.0	0.67	31.1	18.9	86.1	82.5	16	11.6
November	22.4	12.8	0.57	29.4	17.9	78.7	81.1	10	11.6
December	17.6	11.1	0.64	28.1	17.1	75.1	80.0	10	11.4
2017									
January	28.1	15.7	0.55	27.3	16.7	77.4	79.4	10	11.3
February	22.0	15.8	0.71	25.5	15.9	76.9	78.7	10	11.3
March	25.4	10.6	0.42	24.6	15.4	74.6	78.6	15	11.5
April	30.4	19.4	0.64	24.3	14.9	80.9	78.4	13	11.5
May	18.1	11.3	0.62	23.1	14.0	73.5	77.7	9	11.3
June	18.0	11.5	0.64	22.0	13.3	74.8	77.3	7	11.3
July	18.8	10.7	0.59	20.8	12.6	77.7	76.8	9	11.0
August	25.0	19.6	0.80	19.7	11.8	77.9	76.3	12	10.7
September	42.2	26.2	0.62	18.6	11.0	92.0	75.9	19	10.3
October	16.0	7.9	0.49	16.8	10.0	76.4	75.1	11	9.8
November	7.7	3.4	0.44	15.7	9.2	72.1	74.6	11	9.5
December	7.6	4.9	0.64	15.7	9.1	71.5	74.4	8	9.4
2018									
January	7.8	4.1	0.51	15.0	8.6	70.0	74.0	6	9.3
February	16.0	6.4	0.40			72.0		7	
March	6.0	1.5	0.25			68.4		8	
April	7.0	5.3	0.76			70.0		7	
May	15.0	7.9	0.53			70.9		8	
June	19.7	9.5	0.48			72.5		7	
July	1.3	1.0	0.77			69.7		6	

Note: Values are final except for the most recent 6 months which are considered preliminary.
Cycle 24 started in Dec 2008 with an RI=1.7.





*Weekly Geosynchronous Satellite Environment Summary
Week Beginning 06 August 2018*

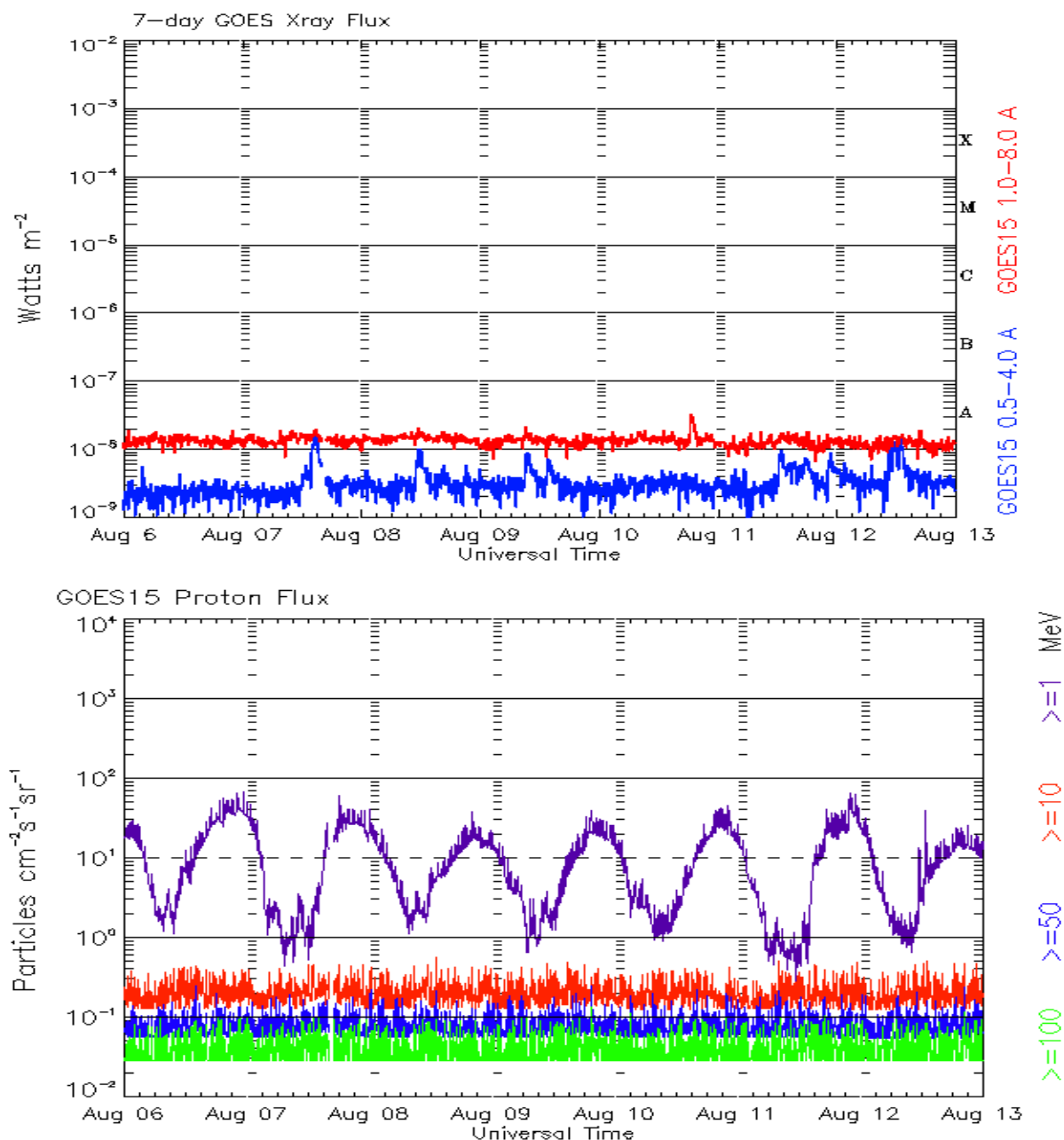
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are 'global' parameters that are applicable to a first order approximation over large areas. H parallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.



*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 06 August 2018*

The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged integral flux units (pfu = protons/cm² -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.



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Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned.
Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

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